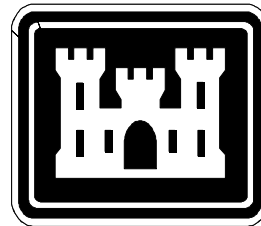


**What is Construction S&A?.....**

**How is Construction S&A  
charged?.....**

**Is it a good value?.....**

**.....and other things we  
want you to know!**



**US Army Corps  
of Engineers**

*.....Your Construction  
Quality Partner*

## *Introduction*

This brochure is written for you. Its purpose is to provide clear information about what *construction management* services the U.S. Army Corps of Engineers (USACE) provides, how these services are charged, and what those charges are. We believe it is important that USACE customers and USACE team members at every level have a good understanding of our construction supervision and administration services and fees -- so that we can work together more effectively.

We are very pleased to have the opportunity to support customers and commanders from many different organizations, in many different locations. We know that *each* customer's project is very important, regardless of how large, small, complex or simple it may be. Our commitment is to manage the construction of your project in a manner that will completely satisfy our customers.

Much of the work we do for our customers involves construction management. As you know, construction is somewhat unique in that it is almost always done on site, using a multitude of individual component materials which are described in volumes of written specifications and reams of engineering drawings and are assembled by a small army of skilled workers, in varying weather conditions. These workers often are employed by several individual companies joined together for a particular project. Because of machinery, weather, processes, ad hoc nature of business relations, and many other aspects, construction projects require intensive management by both contractors and the government client.

The U.S. Army Corps of Engineers provides this construction supervision and administration for -- and in *partnership* with -- its customers. This partnership is extended to include private-sector contractors to form a highly capable team. We hope the information contained in this booklet will assist in continuous improvement of this partnership -- and the satisfaction of the most important team member -- *the customer*.

  
**CHARLES R. SCHROER**  
Chief, Construction Division  
Directorate of Military Programs

*Note: The material in this booklet relates primarily to military programs-type projects; however, some of the information may also be helpful to civil works-type projects and programs.*

## **What is Construction Supervision and Administration (S&A)?**

In simple terms, construction S&A represents activities performed and costs incurred which are generally considered government construction contract management responsibilities (as defined in governing regulations). A listing of typical construction management functions is included at the back of this booklet.

The Corps of Engineers provides construction management services for a wide variety of projects. These services are charged to and financed by the *individual project* through application of a construction supervision and administration (S&A) charge.

Normally, for DOD construction support, S&A is charged on a flat rate basis that conforms to the general type (i.e., O&M or MILCON) and location (i.e., CONUS or OCONUS) of the project. Other non-military customers, and some special military projects, are charged on a cost-reimbursable basis determined by the level of effort mutually agreed upon with the customer.

## **Why do I need construction S&A services for my project?**

Effective supervision and administration of construction contracts and projects are key to a successful outcome... both for the customer *and* the contractor. Why? Because there are many *critical* decisions and verifications that need to be made right and on time during the *construction phase* of all but the most rudimentary projects.

While the scope, criteria, design, contract terms and amount have been decided before contract award, many of these decisions are *general* in nature. The *exact specifics* are determined during construction. Also, there are many unknowns such as precise soil conditions that become known only when dirt (or stone!) is actually excavated.

There also is a huge difference between *drawing up* a project and a contract in the office -- and actually *building* the project out in the elements on site, with real beams, tolerances, connections, loads... and people. Then there is the small matter that contracts don't automatically enforce themselves... real people make the judgements and interpretations, and take the actions necessary to ensure equity, propriety, and success for all involved parties -- and actually get the project built!



The bottom line is that projects and contracts *do not* administer themselves. Using skilled professionals to ensure the construction and the contract are done right is a force multiplier in the truest sense. It would be foolhardy to go

through the time, effort and expense of planning, programming, design, and contracting -- and then "fire and forget" during the construction phase, hoping that magically all these elements will come together, in reality on the ground. No prudent manager, investor or owner does this, either in the private sector or in the Department of Defense. Your investment in construction S&A is a necessity and a wise investment.

### **How is Construction S&A charged?**

Construction S&A for almost all military funded projects is charged at a *flat rate*. As the construction costs are incurred (i.e., progress payments made to contractors) a flat rate percentage of construction placement is charged to the project. The *location* and *fund type* dictate which flat rate will apply. The *CONUS* rate is used for the lower 48 states and the District of Columbia while the *OCONUS* rate is used for Alaska, Hawaii, and other overseas locations. The OCONUS rates are higher because of higher costs overseas.

Fund types are grouped into three categories for construction S&A purposes. MILCON includes *Military Construction* (MCA/MCAF), *Base Realignment and Closure* (BRAC), and *Production Base Support* (PBS) funds. O&M includes *Operation and Maintenance* (Active/Reserve), *Other Procurement* (OPA), and *Research, Development, Testing and Evaluation* (RDT&E) appropriations. DERP includes *Defense Environmental Restoration Program* (DERP), *Installation Restoration Program* (IRP), *Formerly Used Defense Sites* (FUDS), and BRAC environmental appropriations.

Projects that are funded by non-appropriated funds, foreign military sales, host nations, and other non-DOD funds are charged *actual* S&A costs for each project because of the unique fiscal laws applicable to these programs. For this non-flat rate S&A work, we develop a target rate with the customer, based on the level of the services to be performed. While we make every effort to manage within this target rate, final charges are based on actual costs incurred.

The flat rates are reviewed and, if necessary, adjusted annually and may change during the life of the project. Since FY 93 the CONUS MILCON rate has been reduced from 6.0% to 5.7% and the CONUS O&M rate reduced from 8.0% to 6.5%.

#### **What are the current Construction S&A rates?**

The construction S&A rate depends on the *type* of construction (e.g., MILCON or OMA) and the *location* (i.e., CONUS or OCONUS). The following table presents S&A rates for FY97:

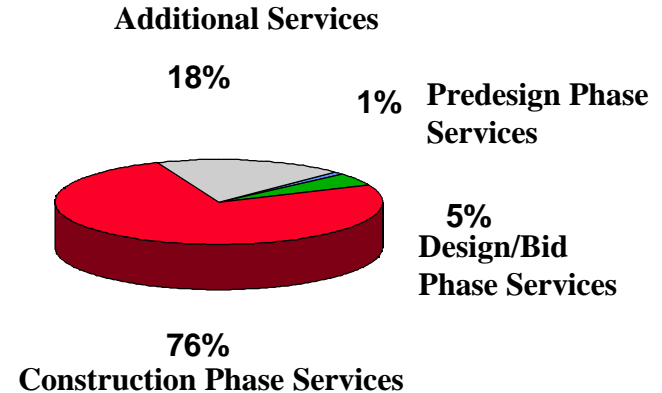
<b>Fund Type</b>	<b>CONUS Locations</b>	<b>OCONUS Locations</b>
<b>MILCON</b>	5.7%	6.5%
<b>O&amp;M</b>	6.5%	8.0%
<b>DERP</b>	8.0%	8.5%

*as of 1 Oct 96*

## What does my Construction S&A dollar really buy for me?

This chart summarizes what your construction S&A dollar buys. As you can see, most of it buys construction services -- project and cost management, contract administration, scheduling, and, of course, quality assurance. The next biggest portion buys additional services such as procurement management of materials and claims analyses. Predesign, design, and bid-phase services take up the remainder.

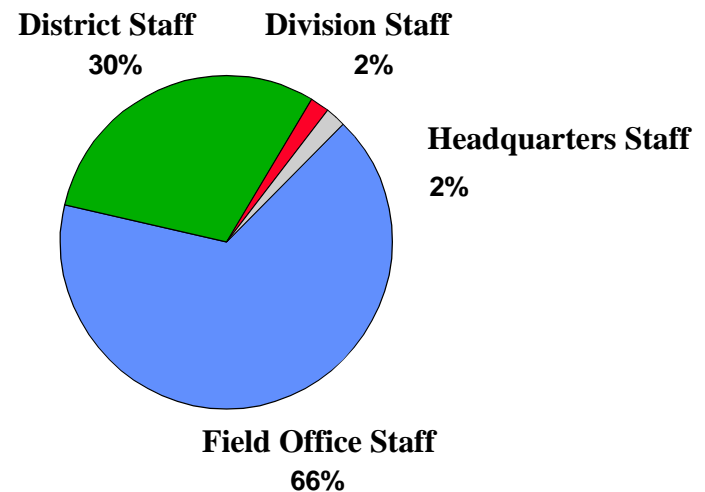
### Phase of Service



### Who provides all of these Construction S&A services?

Corps customers are most familiar with our construction Area and Resident field offices, which, in fact, provide most of the services; however, much work is done behind the scenes as this chart shows. District and Division offices and Headquarters USACE provide some of the S&A services that directly support construction projects.

### Source of Construction Management Services



**Why am I charged the same Construction S&A rate on large projects as I am for small projects?**

The construction S&A flat rates are *average costs* for each project class. Since S&A rates are not set for each project, these *flat rates* allow construction management costs to be recovered within each class or group of projects. This means that for any *individual* project, the *actual* S&A *costs* will not necessarily match the flat rate *charged*. Usually, larger projects subsidize smaller ones. With a variety of projects, these differences average out. If we tried to individually accumulate and charge actual costs for projects, the additional administrative effort would be sizeable and would add significantly to the current rates charged to customers.

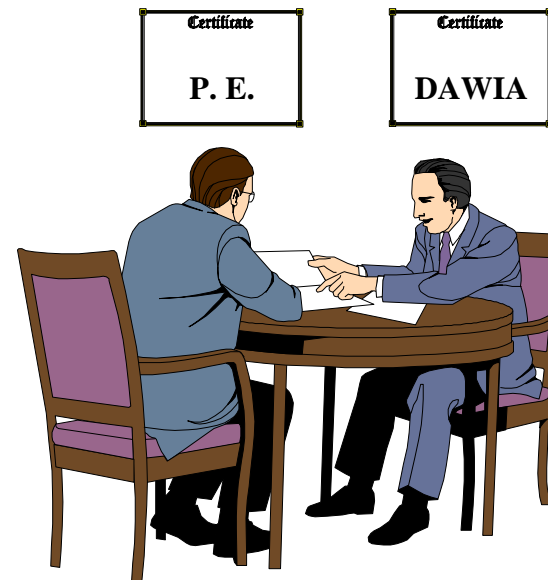
**Are Corps Construction S&A services more expensive than private sector services?**

No. We compared Corps' charges with those of *private sector contractors* and found that our Construction S&A charges for MILCON, O&M and PBS projects are generally lower than those charged by the private sector for similar work.

Program	Private Sector Median Cost (1993)	Corps CONUS Charge (FY97)
Family Housing	5.3%	5.7%
MILCON	6.6%	5.7%
O&M	7.1%	6.5%
PBS	7.7%	5.7%

## How do Corps Construction S&A services stack up against those in the private sector?

Very few private-sector construction management firms offer the full range of S&A services that the Corps provides. Contracting relationships in the private sector are also typically more structured and involve fewer layers than government contracting procedures. The private construction manager, for example, does not have the contracting authority given to the Corps and must, therefore, pass some of the work back to the owner. Regulations now require all of our Resident Engineers to be registered Professional Engineers -- who also have completed acquisition training in compliance with the Defense Acquisition Workforce Improvement Act. These experience and training qualifications are not commonly found in the private sector.



**What S&A services does the Corps provide during construction that the private sector does not?**

Handling claims, negotiating change orders, and administering warranties and guarantees are just some of the extra services provided by the Corps. Administering Government contracts requires more effort than administering a private sector contract. The Corps must handle programs to help small, disadvantaged, and minority businesses. We must also ensure that the work is done safely, complies with minimum wage rates under the Davis-Bacon Act, that the contractor ensures a drug-free workplace, and that Buy American Act provisions are met.

**Does my Construction S&A dollar cover all USACE costs?**

No. Support from USACE Headquarters and Divisions is paid from the Army's operations and maintenance funds, and the cost of that support is *not* passed on to the customer.

**Does the Corps Construction S&A charge pay for project management at the District Office level?**

Project management at the district, during the construction phase, is paid out of S&A income. The project managers normally have more involvement during the design phase of the project, and the district project management costs reflect this. Currently, about 4% of the *construction phase S&A costs* (not project costs) are allocated for district project management costs during construction.

### How does the Corps ensure adequate construction field office staffing?

The Corps obtains manpower allocations from the Department of the Army headquarters. The level of requirements is determined with the aid of a computer model that looks at *past experience* and the *current workloading*. That same model helps to determine the staffing allocation at each district. Finally, the quality assurance plan developed for each project helps determine *how many* people will be assigned to field offices to manage your projects. The project is then monitored to ensure that the assigned staffing matches the project's requirements. Adjustments during the construction phase are common. The Corps also uses contracted technical services to augment its staff for filling gaps or to provide specialized technical skills.



### **How does the Corps charge for non-construction services?**

All Corps district services *except* flat rate construction S&A are charged on an *actual cost* basis. These services include studies, planning, design, real estate, etc. Funds for these services are normally transferred to the Corps on a military interdepartmental purchase request (MIPR). Flat rates are not used for these non-construction services.

### **Why do I have to pay for Corps "mistakes" during design, contracting, or construction phases of the project?**

This is a tough question. Fairness seems to require that when the Corps of Engineers takes on a job for a customer like you, the Corps would be *financially liable* for any mistakes it makes. This is how people commonly allocate risk when dealing with contractors, and that seems analogous with a customer "hiring" the Corps to perform certain design, contracting or construction services.

First of all, it is important to acknowledge that all people and organizations that actually do things, sooner or later make some mistakes. This isn't to imply that making mistakes should be expected, excused or tolerated. Each incident needs to be examined to determine its nature, effect and most importantly its cause or causes. And then all parties need to be accountable for their role, and make every effort to *correct* the mistake and *learn from* it, so that it can be avoided in the future.

Secondly, it is important to realize that the U.S. Army Corps of Engineers is a government agency -- just like nearly all its customers -- and not a contractor. Contractors realize that mistakes will inevitably be made, so they cover this risk by charging each customer a little more, and buying insurance. For a variety of reasons, government agencies like yours and the Corps do not purchase insurance for professional liability. Instead, government agencies are *self-insured*. This means that the federal government assumes the risk of mistakes itself, rather than allocating this to a third party.

If a mistake is made by the installation engineering and construction organization when it is doing design, contracting or construction work *by itself* and *for itself*, what happens? Really nothing external to the organization. The installation simply does whatever is necessary to correct the problem, drawing on the same funds that paid for the work in the first place. Naturally, the same process of analyzing the causes and effects of the problem is followed, with the same objectives of correcting and learning from the mistake.

However, there is an important difference when a Corps district is doing work for this same customer, and a mistake is made. Corps districts are *project funded*, and they do not have "bulk funds" that they can draw on to correct mistakes. Corps districts also do not charge a price above their actual costs, or accumulate a "rainy day fund" or a "mistake fund." They also can not charge the correction of a mistake for one customer *to another customer's fees*. The *only* way a government employee's

mistake in the design or construction contract can be funded is to go with hat in hand to the customer and obtain the necessary funds for correction, even though this is a very uncomfortable exercise for both the Corps and its customers. Of course, if there is liability by contractors who do have assets or insurance, the Corps will look hard at pursuing the correction under appropriate contract terms.

**Are Corps construction S&A services more expensive than those provided by installations or other customers?**

It's hard to give a conclusive reply to this question. As mentioned earlier in this booklet, *Corps districts are project funded*. This means that the districts must recoup all of their *direct and indirect costs* from the fees they charge customers. Accordingly, the Corps cost accounting system is very different from that found at a typical installation or customer organization.

Customer cost accounting systems typically collect only the *direct costs* of the *construction management organization*. No direct or indirect overhead (supervision, utilities, training, personnel fringe benefits, etc.) costs are typically accumulated and spread to the customer's construction management function. Also, costs for support organizations *outside* the installation engineering or public works organization -- such as those of the resources management, safety, contracting, legal, personnel, information management, or training organizations -- are typically not accumulated and spread to the customers construction management function. Military personnel costs are also typically recorded as "no cost" labor under these

customer systems, even though real effort and real money are expended. Finally, the level of risk and complexity of projects, or the level of management intensity may not be comparable.

These and other reasons make it difficult to make easy and reliable cost comparisons between the Corps and a customer's accomplishment of the construction supervision and administration duties. Neither the customers nor the Corps approach will be right for *every* situation or project. *Accordingly, it is important for customers to be sensitive to the **total costs** of doing work by themselves, and compare this against Corps charges and other attributes.*

### **Where did you get the data for this booklet?**

The information compiled here came from many sources. The comparisons with the private sector came from a survey conducted by the *Construction Management Association of America*. The distribution of dollars and effort was determined in an independent study by the *Logistics Management Institute*. We also solicited data from our most experienced field level staff.

### **Am I really getting a good deal with Construction S&A?**

We believe you are! We give you *more service* for *fewer dollars* than the private sector does, and we don't charge you for some of the services. That is not to say that there is no room for improvement. We're always looking

for ways to improve and economize and are continually reviewing our construction management policies and practices to improve them --- and our service to you.

We hope that these efforts will enable us to continue providing the level of service you deserve... at a time when both of us are feeling the impacts of diminishing budgets.

# Appendix A

## Acronyms Used in This Booklet

BRAC	Base Realignment and Closure
CONUS	Continental United States
DERP	Defense Environmental Restoration Program
DFAS	Defense Finance and Accounting Service
DOD	Department of Defense
FUDS	Formerly Used Defense Sites
IFB	Invitation for Bid
IRP	Installation Restoration Program
MILCON	Military Construction
MIPR	Military Interdepartmental Purchase Request
O&M	Operation and Maintenance
OCONUS	Outside the Continental United States
OPA	Other Procurement, Army
RFP	Request for Proposal
PBS	Production Base Support
RDT&E	Research, Development, Testing and Evaluation
S&A	Supervision and Administration
USACE	US Army Corps of Engineers

# **Appendix B**

## **Typical Construction S&A Services**

### ***Design/Bid Phase Services***

Perform on-board technical reviews of plans and specs  
Perform biddability, constructability, operability/  
maintainability and environmental (BCOE) reviews, back-  
checks, and certifications  
Conduct site visits for bidders  
Establish estimated contract durations  
Participate in development of contract acquisition plans,  
IFB/RFP preparation, and source selection boards

### ***Construction Phase Services***

#### **Construction Quality Assurance (QA) Activities**

Prepare QA plans and review contractor's Quality Control  
Plan  
Review contractor's submittals, safety plan, etc.  
Materials labs certifications

#### **On-site Project Management Activities**

Conduct pre-construction meetings, safety conferences, etc.  
Oversee contractor's time schedules  
Conduct Partnering activities (customers, contractors,  
regulators)

### Contract Administration /Management Activities

Process contractor pay estimates/verify quantities  
Analyze, prepare and execute contract modifications  
Manage any Government furnished equipment/materials  
Analyze potential engineering discrepancies and initiate  
A-E responsibility reviews  
Enforce safety, small business, drug free workplace, Buy-  
American, and similar contract provisions  
Resolve contract disputes using alternative dispute  
resolution  
Provide status information to installation staff  
Manage project turnover/commissioning process (including  
preparation of DD Form 1354)  
Perform warranty inspections and support enforcement of  
warranty clauses  
Review and process as-built drawings  
Complete contractor performance evaluations  
Perform contract closeout  
Enforce latent defect actions

### Construction Fiscal Management Activities

Manage construction contract funds  
Manage S&A funds  
Prepare financial reports (internal and external DFAS)